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10/015,825

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Christian Bolik

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KUNZLER & ASSOCIATES  
8 EAST BROADWAY  
SUITE 600  
SALT LAKE CITY, UT 84111

EXAMINER

BHATIA, AJAY M

ART UNIT

PAPER NUMBER

2145

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**Technology Center 2100**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/015,825  
Filing Date: December 10, 2001  
Appellant(s): BOLIK ET AL.

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Christian Bolik, et al.  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 19, 2006 appealing from the Office action mailed September 20, 2005.

**(1) Real Part in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,269,382

Cabrera et al.

7-2001

**(9) Grounds of Rejection**

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The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,3-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Cabrera et al. (U.S. Patent 6,269,382 referred to as Cabrera).

For claim 1, Cabrera teaches, a method of managing a hierarchical storage management (HSM) environment, the environment including at least one HSM server and at least one file server having stored a managed file system, wherein the at least one HSM server and the at least one file server are interconnected via a network and wherein digital data files are migrated temporarily from the at least one file server to the at least one HSM server, the method comprising:

providing at least one list for identifying candidate data files to be migrated;

(Cabrera, Col. 10 lines 25-30, Col. 10 lines 46-53, Col. 4 lines 51-55)

prespecifying a scanning scope (Cabrera, Col. 10 lines 25-30, Col. 10 lines 46-53, Col. 4 lines 51-55) determined by a number of candidate data files; (Cabrera, Col. 14 line 5 to Col. 15 line 25)

scanning the managed file system until (Cabrera, Col. 5 lines 1-25, Col. 5 lines 36-50, Col. 12 lines 36-56) having reached the prespecified number of migration candidate data files; (Cabrera, Col. 14 line 5 to Col. 15 line 25)

selecting migration candidate data files according to at least one attribute;  
(Cabrera, Col. 10 lines 46-53)

recording the selected migration candidate data files in the provided at least one list for identifying candidate data files; and (Cabrera, Col. 10 lines 25-30, Col. 10 lines 46-53, Col. 4 lines 51-55)

migrating at least part of the selected candidate data files identified in the at least one list for identifying candidate data files from the file server to the HSM server.  
(Cabrera, Col. 9 line 53 to Col. 10 line 17, Col. 4 lines 8-19, Col. 10 lines 45-53)

For claim 3, Cabrera teaches, the method according to claim 1, wherein the scanning scope is determined by the total amount of data for the candidate data files and wherein the managed file system is scanned until having the prespecified amount of data.  
(Cabrera, Col. 10 line 65 to Col. 11 line 6)

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For claim 4, Cabrera teaches, the method according to claim 1, wherein the scanning of the managed file system is resumed at a location of the managed file system where a previous scanning is left off, and continued accordingly. (Cabrera, Col. 10 lines 45-53)

For claim 5, Cabrera teaches, the method according to claim 1, wherein replacing a migrated data file in the managed file system by a stub file providing at least information about the location of the migrated data file on the HSM server. (Cabrera, Col. 9 line 53 to Col. 10 line 17)

For claim 6, Cabrera teaches, the method according to claim 1, further comprising monitoring a current state of the managed file system and initiating automigration dependent on the monitored current state of the managed file system. (Cabrera, Col. 12 line 22-67)

For claim 7, Cabrera teaches, the method according to claim 6, comprising the further steps of automigrating candidate data files with respect to the list for identifying candidate data files and assigning a unique identifier to each of the migrated candidate data files. (Cabrera, Col. 16 line 26-52)

For claim 8, Cabrera teaches, the method according to claim 7, wherein the unique identifier is specific to the underlying file system allowing direct access to a migrated data file. (Cabrera, Col. 16 line 26-52)

For claim 9, Cabrera teaches, the method according to any of claim 6, wherein providing two lists for identifying candidate data files, whereby the first list is generated and/or updated by a scanning process and whereby the second list is used by a automigration process, and whereby the automigration process gathers the first list from the scanning process when all candidate data files of the second list are migrated. (Cabrera, Col. 29 lines 27-44)

For claim 10, Cabrera teaches, the method according to any of claim 9, wherein the automigration process is performed by a master/slave concept where the master controls the automigration process and selects at least one slave to migrate candidate data files provided by the master. (Cabrera, Col. 13 lines 3-27)

For claim 11, Cabrera teaches, the method according to claim 1, comprising the additional steps of ranking and sorting the candidate data files contained in the at least one list for identifying candidate data files, in particular with respect to the a file size and/or time stamp of the data files contained in the at least one list for identifying candidate data files. (Cabrera, Col. 10 lines 45-53)

For claim 12, Cabrera teaches, the method according to claim 1, wherein the scanning of the managed file system is initiated dependent on expiration of a prespecified wait interval or initiated by the automigration process. (Cabrera, Col. 10 lines 17-30)

For claim 13, Cabrera teaches, a method of reconciling a managed file system migrated from a file server to an hierarchical storage management (HSM) server via a network in accordance with the method according to any of claims 7 to 12, with a current state of the managed file system on the file server, wherein data files migrated to the HSM server are recorded in a list of migrated data files having a unique identifier for each of the migrated data files, the method comprising the steps of:

querying the list of migrated data files migrated from the managed file server to the HSM server; (Cabrera, Col. 5 lines 1-25, Col. 5 lines 36-50, Col. 10 lines 25-30, Col. 10 lines 46-53)

for each file entry in the list of migrated data files, retrieving from the managed file system at least one attribute of the migrated data file that is identified by the corresponding unique identifier; (Cabrera, Col. 5 lines 1-25, Col. 5 lines 36-50, Col. 10 lines 25-30, Col. 10 lines 46-53)

comparing the retrieved attributes with the corresponding attributes stored in the list of migrated data files; and (Cabrera, Col. 10 lines 25-30, Col. 10 lines 46-53, Col. 4 lines 51-55)

updating the HSM server for the migrated managed file system dependent on the results of the preceding step of comparing. (Cabrera, Col. 30 line 18 to Col. 31 line 62, Col. 10 lines 25-30, Col. 10 lines 46-53, Col. 4 lines 51-55)



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For claim 14, Cabrera teaches, the method according to claim 13, wherein performing the steps of claim 13 by a reconciling process and wherein the reconciling process requests the list of migrated data files via the network from the HSM server. (Cabrera, Col. 30 line 18 to Col. 31 line 62)

Claims 15-20 lists all the same elements of claims 1-14, but in system and product form rather than method form. Therefore, the supporting rationale of the rejection to claims 1-14 applies equally as well to claims 15-20.

#### **(10) Response to Argument**

Appellant argues that Cabrera does not teach a method of limiting the scanning scope to less than scanning the entire local storage tree to find candidate files. The limitation the appellant is addressing is the pre-specifying the scanning scope determined by a number of candidate data files. When the examiner review the specification page 13 lines 1-4 as defined in appellant's summary of the invention, the cited portion which "scanning only until a certain number of migration candidates have been found," the support found in the specification fails to define how the certain number is specified. Therefore in view of the specification not particularly specifying the "certain number" examiner has interpreted in light of the specification that the application is able to specify the certain number, which Cabrera teach. In Col. 10 lines 25-30 in a pre-migration occurs, this is where the application program of Cabrera

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defines the "certain number" which is the group that is selected prior to the migration. The claim limitations presented by the applicant are directed to point at which the files are migrated, which would be the scanning of files that takes place after the pre-migration, where the applicant has defined the "certain number" as those that have been identified in the pre-migration. In view of appellant's failure to claim how the "certain number" is defined, in addition no support is found in the specification, the examiner has clearly not met the requirement of anticipation for the limitation directed toward the scanning scope that occurs at migration (note a scan occurs after the pre-migration).

Further appellant argues that Cabrera "does not indicate any method for scanning the local storage to find the candidate files." This argument is directed at the method by which the system identifies candidates for migration. The limitation "selecting a migration candidate data files according to at least one attribute" applicant has selectively written the claim for broad interpretation. This can be seen in that support for this limitation on page 9 lines 17-18 of the specification, the appellant defines the criteria as being timestamp or file size, which is more specific than that which the appellant has claimed. Regardless of appellant's broadness or narrowness of the claim limitation, Cabrera teaches the same attributes for selecting a file Col. 10 lines 46-54, time and size of the file. Therefore it is clear that Cabrera anticipates this claim limitation as well.

Additionally applicant argues that Cabrera does not describe scanning process to find pre-migration candidate files but implies only some sort of scanning. Here

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appellant again has misinterpreted the application of prior art to appellant's claims. Appellant's claims are related to scanning scope, which occurs when appellant's invention is completing the migration process. Cabrera teaches, the claims as appellant has claimed in the present invention. Appellant's has elected to argue part of Cabrera and not the reference as a whole. Cabrera when reads a reference in it entirety anticipates the presently claimed invention.

Appellant argues that Cabrera does not disclose scanning the local storage to find candidate files. Cabrera identifies these candidates for migration during the pre-migration process, in the hierarchical storage system Col. 10 lines 57-65, which is the same storage system as is disclose in the preamble of the present claim limitation.

Appellant argues that examiner has not given any weight to the amendment and examiner admitted that applicant have overcome the rejection. Appellant has misunderstood the examiner. Appellant argument, canceling and moving claim 2 in to independent claim 1, in addition amending similar claim limitation to the other independent claims. Examiner stated in the advisory action that a new rejection addressing the newly amended claims would have to be address, but they did not present new issues since they were taken from a dependent claim that presently addressed by the previous rejection.

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Appellant continues to repeat the similar argument. Therefore the rebuttal to arguments present above, overcome appellant's arguments. Showing the Cabrera anticipates the presently claimed invention.

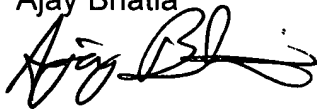
**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Ajay Bhatia



Conferees:



JASON CARDONE  
SUPERVISORY PATENT EXAMINER



RUPAL DHARIA  
SPE AU 2141